

LUPINUS PERENNIS L. f. **albiracemus** A. H. Moore, f. nov. floribus albis.

Type specimen: ONTARIO, West Toronto Junction, June 3, 1893 (*Wm. Brodie*, in Herb. U. S. Nat. Mus.). "Isolated plants numerous with white flowers growing with great patches of the blue."

POLYGONUM PERSICARIA L. f. **albiflora** Millsp. W. Va. Agr. Exper. Sta. ii (Bull. no. 24), 432 (June, 1892) floribus albis.

POLYGONUM HYDROPIPEROIDES Michx. f. **leucochranthum** A. H. Moore, f. nov. floribus albis.

Type specimen: WEST VIRGINIA, Randolph County, clayey swamp, north bank of Tygart's Valley River, Huttonsville, Sept. 23, 1904 (*A. H. Moore*, no. 2507 in Herb. Moore).

WASHINGTON, D. C.

SOME ANTENNARIAS OF NORTHEASTERN AMERICA.

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DURING the fifteen years since our northeastern species of *Antennaria* received detailed study a vast amount of material has accumulated. For the most part this has fallen readily into the categories already defined; but a few plants, especially from eastern Quebec, Newfoundland and Labrador, are so different as to demand special attention. Two of these, *A. eucosma* Fernald & Wiegand and *A. alpina*, var. *cana* Fernald & Wiegand, have recently been defined;¹ but the following have not heretofore been worked out.

ANTENNARIA **pygmaea**, n. sp., nana 3–4.5 cm. alta monocephala humifusa, stolonibus assurgentibus perbreuibus haud elongatis; foliis basilæribus oblanceolatis mucronatis 8–14 mm. longis 2.5–3.5 mm. latis supra glabris vel glabratis subtus laxe lanatis vel glabratis, caulinis circa 9 confertis lineari-oblanceolatis 6–14 mm. longis subtus lanatis supra glabris vel glabratis, apice plano scarioso glabro 1.5–2 mm. longo lanceolato vel anguste deltoideo; involucre femineo hemisphaerico 7 mm. alto 12–13 mm. lato (in specimine siccato) basi lanato; bracteis 5-seriatis valde imbricatis oblongis obtusis, exterioribus fuscis cum apice breve stramineo, interioribus cum apice elongato scarioso stramineo munitis.

¹ Fernald & Wiegand, RHODORA, xiii. 23, 24 (1911).

Dwarf, 3–4.5 cm. high, monocephalous, humifuse; the assurgent stolons very short, not perceptibly elongated: basal leaves oblanceolate, mucronate, 8–14 mm. long, 2.5–3.5 mm. wide, glabrous or glabrate above, loosely lanate or glabrate beneath; the cauline about 9, crowded, linear-oblanceolate, 6–14 mm. long, lanate beneath, glabrous or glabrate above, with a lanceolate or narrowly deltoid glabrous flat scarious tip 1.5–2 mm. long: pistillate involucre hemispherical, 7 mm. high, 12–13 mm. broad (in the dried specimen), lanate at base: bracts in about 5 series, clearly imbricated, oblong, obtuse; the outer fuscous, with a short stramineous tip; the inner with a long obtuse stramineous tip.—LABRADOR: without definite locality, coll. by members of the *Unitas Fratrum* (TYPE in Gray Herb.); Okkak, *Weitz*.

Related to *A. alpina*, var. *monocephala* (DC.) T. & G. and to *A. glabrata* (Vahl) Greene, but differing from both in the conspicuously imbricated involucre with obtuse paler bracts; those two boreal plants (both occurring also in northern Labrador) having the linear-attenuate bracts uniformly dark-colored and of nearly equal length. It is noteworthy that this involucre character of *A. pygmaea* was recognized by Steetz, who, upon one of the specimens made the note: "Distinguitur facillime a varietate *monocephala* Ant. alpinae: involucri squamis interioribus obtusis, scariosis, nec acuminatis, coloratis." *A. pygmaea* is the plant referred to by Gray, in the *Synoptical Flora*, as *A. carpatica*, "a monocephalous form!" In its small rosettes of leaves and its involucre, it is, however, quite unlike *A. carpatica* or any of its known allies.

A. straminea, n. sp., planta humifusa, stolonibus foliosis perbrevibus vel paulo elongatis (ad 7 cm. longis); foliis basilaribus spatulatis subacutis vix mucronatis 5–12 mm. longis 2–4 mm. latis supra albidis tomento denso minutoque; caule florifero 3–14 cm. alto gracile remote folioso; foliis caulinis 8–10 linearibus 6–14 cm. longis 1–2 mm. latis, mediis attenuatis apice subulato fusco, superioribus apice lineari scarioso; capitulis femineis 1–7 plerumque dense corymbosis hemisphaerico-campanulatis basi rotundatis; involucre 5.5–7 mm. alto 4.5–8 mm. lato (in specimine siccato); bracteis 4–6-seriatis valde imbricatis, exterioribus ovatis vel oblongis brunneis basi paulo lanatis apice tenue chartaceo stramineo obtuso vel subacuto, mediis oblongis apice deltoideo obtuso vel subacuto stramineo, interioribus apice lanceolato eroso stramineo; achaeniis glabris; stylo flavescente deinde brunneo.

Plant humifuse, the leafy stolons very short or slightly elongated (up to 7 cm. long): leaves of the rosettes spatulate, subacute, barely mucronate, 5–12 mm. long, 2–4 mm. broad, white above with dense fine tomentum: flowering stem 3–14 cm. high, slender, remotely leafy: cauline leaves 8–10, linear, 6–14 mm. long, 1–2 mm. wide;

the median attenuate to a dark subulate tip; the upper with a linear scarious tip: pistillate heads 1–7, usually in a close corymb, hemispheric-campanulate, rounded at base: involucre 5.5–7 mm. high, 4.5–8 mm. broad (in the dried specimen), with 4–6 series of very distinctly imbricated bracts: the outer bracts ovate or oblong, brown, slightly lanate at base, with a thin chartaceous stramineous obtuse or subacute tip; the median oblong, with a deltoid obtuse or subacute stramineous tip; the inner with a lanceolate erose stramineous tip: achenes glabrous: style yellowish, becoming brown.—NEWFOUNDLAND: turfy and (calcareous) rocky crests, Twillingate, July 20, 1911, *Fernald, Wiegand & Bartram*, no. 6340 (TYPE in Gray Herb.); limestone barrens near sea-level, Pointe Riche, August 4, 1910, *Fernald, Wiegand & Kittredge*, no. 4140.

A. straminea strongly simulates *A. alpina*, var. *cana* Fernald & Wiegand in its small white foliage but in its involucre is very different, *A. alpina* and its varieties having much larger pistillate heads with long attenuate subequal very dark bracts. *A. straminea* in its foliage and inflorescences also suggests *A. neodioica*, var. *rupicola* (Fernald), discussed below, but that has the larger cream-colored bracts less imbricated and the larger basal leaves with a longer mucro at tip and covered with a much thinner and sparser pubescence.

A. subviscosa, n. sp., planta dense humifusa ramis prostratis sublignis interdum 4–5 dm. longis, stolonibus confertis; foliis basilaribus spatulatis obtusiusculis vix mucronatis vel breviter mucronatis 0.5–1.5 cm. longis 2–5 mm. latis dense albido-tomentosis; caule florifero 0.5–1.5 dm. alto omnino albido-tomentoso supra glanduloso-hirsuto; foliis caulinis 7–10 tomentosus, inferioribus lineari-oblanco-latis mucronatis 1.5–2.5 cm. longis, superioribus lineari-attenuatis apice pubescente subscarioso subulato vel involuto; capitulis femineis 3–9 dense vel laxe corymbosis; involucro turbinato-campanulato 5–6.5 mm. alto; bracteis circa 3-seriatis, exterioribus 3–4 mm. longis oblongis subherbaceis virescentibus vel stramineis interdum roseo-tinctis basi glanduloso-viscoso apice tenue obtusiusculo gilvo vel roseo-tincto, interioribus angustioribus acutiusculis.

Plant densely humifuse, the trailing branches subligneous, often 4–5 dm. long; stolons very short and crowded: leaves of the rosettes spatulate, obtusish, scarcely mucronate or with a short mucro, 0.5–1.5 cm. long, 2–5 mm. broad, densely white-tomentose: flowering stems 0.5–1.5 dm. high, white-tomentose throughout, glandular-hirsute above: cauline leaves 7–10, tomentose; the lower linear-oblanco-late, mucronate, 1.5–2.5 cm. long; the upper linear-attenuate, with a subulate or involute subscarious pubescent tip: pistillate heads 3–9, densely or loosely corymbose: involucre turbinate-campanulate, 5–6.5 mm. high: bracts about 3-seriate; the outer 3–4 mm. long, oblong, subherbaceous, greenish or stramineous, often rose-tinged,

glandular-viscid, with a thin obtusish cream-colored or rose-tinged tip; interior narrower, acutish.—QUEBEC: limestone and limestone-conglomerate ridges from Point aux Corbeaux to Cap Caribou, Bic, July 8, 1907, *Fernald & Collins*, no. 1195 (TYPE in Gray Herb.).

Some material of *A. subviscosa* was distributed as *A. neodioica*, var. *gaspensis* Fernald; but that plant has a prominent mucro at the tip of the rosette-leaves, the upper cauline leaves with a more scarious tip and not at all glandular, and the glandless involucre 8–10 mm. high, with the very thin bracts linear or linear-attenuate and never tinged with pink. *A. subviscosa* is nearest related to the western *A. rosea* (Eaton) Greene and *A. microphylla* Rydberg, from both of which it is quickly distinguished by the glandularity of its upper leaves and inflorescence; its usually fewer heads, with broader and fewer bracts; and its ordinarily fewer cauline leaves, with less pronounced scarious tip. At Bic it was found on a cold north-facing limestone wall, where it was associated with several other localized species: *Carex concinna* R. Br., *Draba hirta* L., *Arabis Holboellii* Hornem., *Potentilla nivea* L., etc.

A. CANADENSIS Greene, var. **spathulata**, n. var., formae typicae habitu statura, etc. similis; foliis basilaribus cuneato-spathulatis vix petiolatis apice rotundatis 1–2.3 cm. longis 4–9 mm. latis; capitulis paucis; bracteis lineari-oblongis apice albescente.

Similar to the typical form in habit, stature, etc., but with the basal leaves cuneate-spatulate, scarcely petioled, rounded at summit, 1–2.3 cm. long, 4–9 mm. broad: heads few: bracts linear-oblong, with whitish tip.—NEWFOUNDLAND: rocky bed of South Arm River, Holyrood, August 23, 1894, *Robinson & Schrenk*; sandstone ridges and banks, Rushy Pond, August 11, 1911, *Fernald, Wiegand & Darlington*, no. 6362 (TYPE in Gray Herb.); damp talus of limestone sea-cliffs, Pointe Riche, August 4, 1910, *Fernald, Wiegand & Kittredge*, no. 4143.

In *A. canadensis* of Canada and the northeastern states, the basal leaves are of an oblanceolate or narrowly obovate outline, pointed at tip, and constricted below to a petiolar base. All three collections of *A. canadensis* from Newfoundland, from three remote districts, are uniformly different from the true form of the species in the outline of the basal leaves and seem to represent a well-defined geographic variety.

A. NEODIOICA Greene, var. **rupicola** (Fernald), n. comb. *A. rupicola* Fernald, RHODORA, i. 74 (1899).

In its best development *A. rupicola* is distinguished from *A. neodioica* by its much narrower basal leaves, the more numerous and greener cauline leaves, and the heavier or firmer cream-colored or

yellowish mostly oblong involucre bracts. The plant has heretofore been recorded only from the slaty ledges along the Mattawamkeag River in Aroostook County, Maine; but in 1911 it was found in profusion, by Messrs. Wiegand, Bartram, Darlington and the writer, upon the slate and sandstone ledges below the Grand Falls of the Exploits River in Newfoundland and in some abundance on rocks and headlands at other points in eastern Newfoundland. Along the Exploits River both *A. neodioica* and *A. rupicola* are in the greatest abundance and it was there evident that, though very distinct in their extremes, they present numerous transitional tendencies. Since all the Antennarias yet found in Newfoundland are strictly pistillate, with the single exception of the unique *A. eucosma*, the transitions can scarcely be explained as of hybrid origin and it seems wisest to treat *A. rupicola* as an extreme variety of *A. neodioica*. Another interesting extension of its range is furnished by a collection of var. *rupicola* from the rocky shore of the Onaman River in the Thunder Bay District of Ontario, where it was secured by Mr. H. E. Pulling in the summer of 1912. The known area of var. *rupicola* now extends from eastern Newfoundland to northern Maine and northern Ontario.

A. PETALOIDEA Fernald, var **subcorymbosa** (Fernald), n. comb. *A. neglecta*, var. *subcorymbosa* Fernald, Proc. Bost. Soc. Nat. Hist. xxviii. 246 (1898).

When first put forward as a variety of *A. neglecta*, this plant was known only from a single station on Mt. Desert Island, Maine; and it was distinguished from *A. neglecta* by its very tall flowering stems and by "heads loosely subcorymbose on elongated pedicels, the lowest sometimes 6 cm. long: involucre bracts nearly all acute, the inner long-attenuate." Subsequently, when the northern representative of *A. neglecta* with corymbose heads, *A. petaloidea* Fernald,¹ was described, *A. neglecta*, var. *subcorymbosa* was included in it. But during the succeeding fifteen years, while a large amount (about 75 numbers) of *A. petaloidea* and its var. *scariosa* Fernald² has accumulated, the original sheet of *A. neglecta*, var. *subcorymbosa* has not been matched in certain characters, which were not at first noticed as peculiar. In true *A. petaloidea*, with the involucre bracts with petaloid white tips, the basal leaves are spatulate and decidedly rounded at summit, and the cauline leaves extend remotely but regularly to the inflorescence. In var. *scariosa*, with the long-attenuate involucre bracts very scarious

¹ Fernald, RHODORA, i. 73 (1899).

² Fernald, l. c.

(not petaloid) and lustrous, the basal leaves are somewhat oblanceolate and acutish, and the cauline, as in true *A. petaloidea*, extend regularly to the inflorescence. In the original Mt. Desert sheet of *A. neglecta*, var. *subcorymbosa* the basal leaves are oblanceolate and acutish as in *A. petaloidea*, var. *scariosa*, but the involucre bracts have petaloid tips as in true *A. petaloidea*. In the Mt. Desert plant, however, the leaves extend half or two-thirds up the flowering stem, above which point the stem is naked or nearly so until just below the inflorescence, giving the corymb a long-peduncled aspect.

This nearly naked summit of the flowering stem is of interest because in the only Newfoundland *Antennaria* yet known with elongate creeping stolons this character reappears; and the Newfoundland material, though with larger leaves and ordinarily longer pedicels, has the outline of the basal leaves and the texture of the involucre exactly as in the original of *A. neglecta*, var. *subcorymbosa*. Similarly, the only material of this group yet known from Nova Scotia, a fine suite of specimens collected by Mr. Harold St. John at Sunny Brae, Pictou County, is quite like the Mt. Desert and Newfoundland plants in its details; and, as indicated by the field-experience of Mr. St. John and the writer during June and July of the present year, the commonest *Antennaria* on the eastern half of Prince Edward Island is quite like the Mt. Desert and Nova Scotian plant and they all belong with the northern *A. petaloidea* rather than with the more southern *A. neglecta*. This pronounced variant with acutish leaves, tall flowering stems (3–4.5 dm. high) nearly or quite naked for a long distance (commonly 10–15 cm.) below the inflorescence, long pedicels (the lowest commonly 2.5–17 cm. long), and somewhat petaloid involucre bracts, is, then, the representative of *A. petaloidea* along the southeastern border of its range, from Mt. Desert Island to Prince Edward Island and Eastern Newfoundland.

GRAY HERBARIUM.